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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,322	02/02/2001	Phillip Thomas Corvino	LUC-297/Corvino 1-7-1-24-	9329
32205	7590	02/23/2005	EXAMINER TSEGAYE, SABA	
PATTI & BRILL ONE NORTH LASALLE STREET 44TH FLOOR CHICAGO, IL 60602			ART UNIT 2662	PAPER NUMBER

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/776,322

Applicant(s)

CORVINO ET AL.

Examiner

Saba Tsegaye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-9,11-13,15-19 and 21-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-9,11-13,15-19 and 21-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the amendment filed 9/20/05. Claims 1-3, 5-9, 11-13, 15-19 and 21-29 are pending. Currently no claims are in condition for allowance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3, 5-9, 11-13, 15-19 and 21-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 11, the phrase “on a bases of an individual unit that comprises the plain old telephone service and asymmetric digital subscriber line splitter” is vague. It is not clear what is referred by “on bases of an individual unit”.

Claim Rejections - 35 USC § 103

4. Claims 1-3, 5, 6, 9, 11-13, 15, 16, 19 and 21-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zitting et al. (US 6,584,148) hereafter Zitting.

Regarding claims 1, 11, 24 and 29, Zitting discloses, Fig. 1, a system compressing:

a splitter (23) that is locatable at a central office (20) that comprises a plurality of lines (25, 27);

wherein the splitter (23) is configured to be connectable with a subset of the plurality of lines (42, 25, 27) on a one-to-one basis between the splitter (23) and the subset of the plurality of lines (42, 25, 27);

wherein the central office comprises a main distribution frame (22) and a switch (24), wherein the main distribution frame(22) is coupled with a first line (42) of the subset of the plurality of lines, wherein the switch (24) is couple with a second line (27) of the subset of the plurality of lines, wherein the first line is different from the second line (column 3, lines 36-53);

wherein the splitter comprises a plain old telephone service and asymmetric digital subscriber line splitter (23), wherein the second line is convertible from a plain old telephone service line to a plain old telephone service and asymmetric digital subscriber line on a basis of an individual unit that comprises the plain old telephone service and asymmetric digital subscriber line splitter and the subset of the plurality of lines (column 4, lines 44-51). Zitting does not expressly disclose that the splitter is without employment of splitter shelf.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use splitter without employment of splitter shelf. The average shelf spacing can be selected based on variety parameters such as ergonomics and available central office space. One would have been motivated to do this because splitter without employment of splitter shelf would maximize the amount of space in the central office by reducing tangled and unmanageable wires.

Regarding claims 2 and 12, Zitting discloses the system of claim 1, wherein the subset of the plurality of lines comprises the first line (25, 27), the second line (the lines connected

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between the splitter 23 and the switch 24), and a third line (the lines connected between the splitter 23 and the DSLAM 28), wherein the first line is different from the third line, wherein the second line is different from the third line;

wherein the first line comprises a plain old telephone service and asymmetric digital subscriber line (25, 27), wherein the second line comprises a plain old telephone service line (splitter 23 separates the voice-band signal and communicates the voice-band signals to the voice switch 24), wherein the third line comprises a plain old telephone service and asymmetric digital subscriber line (splitter 23 communicates the DSL signals to a DSL access multiplexer DSLAM 28); and

wherein the plain old telephone service and asymmetric digital subscriber line splitter is configured to be connectable with the first line, the second line, and the third line as the individual unit in the central office, wherein the individual unit comprises the plain old telephone service and asymmetric digital subscriber line splitter, the first line, the second line, and the third line (column 3, lines 36-53; column 4, lines 27-51).

Regarding claims 3 and 13, Zitting discloses the system of claim 1, wherein the first line comprises a plain old telephone service and asymmetric digital subscriber line (25, 27), wherein the second line comprises a plain old telephone service line (splitter 23 separates the voice-band signal and communicates the voice-band signals to the voice switch 24); and

wherein the plain old telephone service and asymmetric digital subscriber line splitter is configured to be connectable with the first line and the second line as the individual unit in the central office, wherein the individual unit comprises the plain old telephone service and

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asymmetric digital subscriber line splitter, the first line, and the second line (column 3, lines 36-53; column 4, lines 27-51).

Regarding claims 5 and 15, Zitting discloses the system of claim 1, wherein the switch (24) comprises a plain old telephone service interface circuit (column 3, lines 43-47), wherein the central office (20) comprises a digital subscriber line multiplexor (28), wherein the digital subscriber line multiplexor is coupled with a third line of the subset of the plurality of lines (**splitter 23 communicates the DSL signals to a DSL access multiplexer DSLAM 28**), wherein the first line is different from the third line, wherein the second line is different from the third line (see Fig. 1); and

wherein the plain old telephone service and asymmetric digital subscriber line splitter is configured to be connectable with the first line, the second line, and the third line without employment of a splitter shelf (column 3, lines 36-53; column 4, lines 27-51).

Regarding claims 6 and 16, Zitting discloses the system of claim 1, wherein the first line (25, 27) comprises a plain old telephone service and asymmetric digital subscriber line, wherein the second line comprises a plain old telephone service line (**splitter 23 separates the voice-band signal and communicates the voice-band signals to the voice switch 24**);

wherein the plain old telephone service and asymmetric digital subscriber line splitter (23) comprises a low-pass filter (**it is inherent that the splitter 23 to comprise a low-pass filter in order to extract a POTS signal from the mixed POTS/DSL signals**), and wherein plain old telephone service is obtainable through connection of the low-pass filter with the first line

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and the second line (**splitter 23 separates the voice-band signal and communicates the voice-band signals to the voice switch 24**).

Regarding claims 9 and 19, Zitting discloses where the central office comprises a local telephone company-switching center (**the voice switch 24, DSLAN 28, MDF 22, Splitter 23, and the plurality of voice and data lines of figure 1 make up a telephone switching center**).

Regarding claims 21 and 26, Zitting discloses wherein the plain old telephone service and asymmetric digital subscriber line splitter (23) employs a first mixed plain old telephone service and asymmetric digital subscriber line signal to obtain a plain old telephone service signal and second mixed plain old telephone service and asymmetric digital subscriber line signal (**splitter 23 separates the voice-band signal and communicates the voice-band signals to the voice switch 24; col. 3, lines 41-48; col. 4, lines 42-47**).

Regarding claims 22 and 27, Zitting discloses the system of claim 21, wherein the switch (24) comprises a plain old telephone service interface circuit (col. 3, lines 43-48), wherein the central office (20) comprises a digital subscriber line multiplexor (28) that comprises an asymmetric digital subscriber line interface circuit (col. 4, lines 42-47);

wherein the plain old telephone service and asymmetric digital subscriber line splitter (23) sends the plain old telephone service signal to the plain old telephone service interface circuit (**splitter 23 separates the voice-band signal and communicates the voice-band signals to the voice switch 24, which communicates the voice-band signals to the PSTN 50; col. 3,**

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lines 41-48), wherein the plain old telephone service and asymmetric digital subscriber line splitter (23) sends the second mixed plain old telephone service and asymmetric digital subscriber line signal to the asymmetric digital subscriber line interface circuit (splitter 23 communicates the DSL signals to a DSL access multiplexer DSLAM 28, wherein DSL modems (in DSLAM) which format the incoming DSL signal for transmission over an appropriate data network; col. 4, lines 42-47).

Regarding claims 23 and 28, Zitting discloses the system in combination with the main distribution frame (22 and 26), wherein the main distribution frame comprises a protector that is electrically connected with the first line (25), wherein the first line comprises a connector (27) that is electrically connected with a connector of the plain old telephone service and asymmetric digital subscriber line splitter (23);

wherein the protector shields the central office from potential over-voltage and/or over-current received from an outside plant (column 7, lines 5-33).

Regarding claim 25, Zitting discloses the system wherein the individual unit comprises a module installable on the second line to convert the second line from the plain old telephone service line to the plain old telephone service and asymmetric digital subscriber line (column 4, lines 47-51).

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5. Claims 7, 8, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zitting et al. in view of Guenther et al. (US 6,438,226) hereafter Guenther.

Regarding claims 7 and 17 Zitting discloses all the claim limitations as stated above. Further, Zitting discloses where the central office comprises a main distribution frame (figure 1 includes a main distribution frame 22; communication lines 25 and 27, each of which are typically twisted copper wire pairs and carry both voice-band and DSL signals). Regarding claims 8 and 18 Swam discloses where the pluralities of lines comprise a particular line that is different from every line of the subset of the plurality of lines (figure 1 shows a voice line, a data line and a mixed voice/data line with each line having a one-to-one connection with splitter 23).

Zitting fails to expressly disclose where main distribution frame comprises a plurality of wire wrap terminals², and where the splitter is configured to be mountable on a pair of wire wrap terminals of the plurality of wire wrap terminals, allowing the splitter to be installable on the subset of the plurality of lines without interruption of plain old telephone service on the particular line.

Guenther discloses a splitter assembly for a main distribution frame, with the distribution frame having a plurality of terminals each with wire wrap connections to prevent POTS interruptions the cross-connect field of the main distribution frame (see col. 2 lines 15-25 and col. 4 lines 50-67).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Zitting's apparatus to utilize a main distribution frame having a plurality of wire wrap terminals for the mounting of the splitter lines, as taught by Guenther. The

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motivation is a system that preserves cabinet space, reduces wire clutter and eliminates POTS signal backtracking to the modem, as explained by Guenther on column 2 lines 15-25.

Response to Arguments

6. Applicant's arguments with respect to claims 1-3, 5-9, 11-13, 15-19 and 21-29 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST
February 18, 2005


JOHN PEZZLO
PRIMARY EXAMINER